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10/033,193	12/27/2001	Manabu Nishizawa	SCEY 19.300	7325

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KATTEN MUCHIN ZAVIS ROSENMAN
575 MADISON AVENUE
NEW YORK, NY 10022-2585

EXAMINER

LERNER, MARTIN

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 11/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/033,193

Applicant(s)

NISHIZAWA ET AL.

Examiner

Martin Lerner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 to 20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 to 20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/27/01 & 3/17/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The Specification contains errors of non-idiomatic grammar with respect to lack of agreement between verb tense and plurals. It is requested Applicants review the Specification and correct any errors of non-idiomatic English.

On page 12, line 8, "thorough" should be --through--.

On page 27, there is no reference to Steps S14 and S15 from Figure 14.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 to 4, 7 to 11, 13 to 16, 19, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by *Strubbe et al.*

Regarding independent claims 1, 13, and 19, *Strubbe et al.* discloses a voice processing method and program, comprising:

“detecting a voice tone based on inputted voice information” – an audio input 245 (“inputted voice information”) is received by a microphone; an audio classifier 210 then generates a current state information signal which it applies to a mood/personality classifier 290; the mood/personality classifier 290 receives signals from the various classifiers and processes these to generate a mood/personality state signal of a given emotional state and a given personality (column 21, lines 1 to 11; column 22, lines 44 to 53; column 24, lines 53 to 59: Figure 3); an emotional state or a personality corresponds to “a voice tone”;

“outputting voice data whose voice tone corresponds to the detected voice tone” – response generator 415 receives the mood/personality state vector and parsed reply data from the mood/personality classifier 290; response generator 415 selects a response from the response data store 440 based on the mood/personality state (column 24, line 60 to column 25, line 4: Figure 4); response generator 415 may output text data and transmit this to a text to speech converter 275 to generate speech output (column 26, lines 5 to 7: Figure 5).

Regarding independent claims 7 and 20, *Strubbe et al.* discloses a voice processing device, comprising:

“a voice tone detection means for detecting a voice tone based on inputted voice information” – an audio input 245 (“inputted voice information”) is received by a microphone; an audio classifier 210 then generates a current state information signal

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which it applies to a mood/personality classifier 290; the mood/personality classifier 290 receives signals from the various classifiers and processes these to generate a mood/personality state signal of a given emotional state and a given personality (column 21, lines 1 to 11; column 22, lines 44 to 53; column 24, lines 53 to 59: Figure 3); an emotional state or a personality corresponds to “a voice tone”;

“a voice information storage means having stored therein voice data corresponded to a plurality of voice tones” – response generator 415 may select an output template from response data store 440; response generator 415 selects templates that contain text, and transmit this to a text to speech converter 275; response generator 415 selects the most appropriate templates in the response data store 440 based on the mood/personality state (column 25, line 61 to column 26, line 42: Figure 5);

“a voice output-control means for outputting voice data corresponded to the detected voice tone from the voice information storage means” – response generator 415 receives the mood/personality state vector and parsed reply data from the mood/personality classifier 290; response generator 415 selects a response from the response data store 440 based on the mood/personality state (column 24, line 60 to column 25, line 4: Figure 4); response generator 415 may output text data and transmit this to a text to speech converter 275 to generate speech output (column 26, lines 5 to 7: Figure 5); response generator 415 is responsive not only to the utterance of the user in terms of the data contained in the text, but also the classified emotional state and

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personality of the user may result in shifts in the style (mood) of the conversation simulator's response (column 26, lines 35 to 42: Figure 5).

Regarding claims 2, 8, and 14, *Strubbe et al.* further discloses:

"analyzing the meaning of the inputted voice information" – speech to text converter 215 parses the text using grammatical or structural rules such as used in natural language search engines; the result of this parsing is the extraction of data that indicates a type of input text (column 21, line 66 to column 22, line 23: Figure 3); extraction of grammatical structure involves "the meaning" of inputted voice information;

"determining the voice tone based on the analyzed meaning" – mood/personality classifier 290 receives signals from the various classifiers to generate a mood/personality state; a set of rules for classifying a mood or personality includes a low incidence of words suggesting enthusiasm such as superlatives as adjectives from input parser 410 (column 22, lines 44 to 63: Figure 3); thus a mood or personality ("the voice tone") is determined from "the analyzed meaning" supplied by input parser 410.

Regarding claims 3, 9, and 15, *Strubbe et al.* further discloses:

"analyzing the meaning of the inputted voice information" – speech to text converter 215 parses the text using grammatical or structural rules such as used in natural language search engines; the result of this parsing is the extraction of data that indicates a type of input text (column 21, line 66 to column 22, line 23: Figure 3);

"detecting a voice level based on the inputted voice information" – audio classifier 210 produces a signal indicating modulation inflection intensity; audio classifier 210 produces a signal indicating a quiet or flat tone in the voice (column 22, lines 64 to 65:

Figure 3); a quiet or flat tone in the voice indicates “a voice level”; also, audio classifier 210 may be indicating that the speaker’s voice is more highly pitched (“a voice level”) than usual (column 27, lines 2 to 6);

“determining the voice tone based on the analyzed meaning and detected voice level” – mood/personality classifier 290 receives signals from the various classifiers to generate a mood/personality state; a set of rules for classifying a mood or personality includes a low incidence of words suggesting enthusiasm such as superlatives as adjectives from input parser 410 (column 22, lines 44 to 63: Figure 3); additionally, mood/personality classifier 290 receives signals from audio classifier 210 to generate a mood/personality state signal; audio classifier 210 produces a signal indicating a quiet or flat tone in the voice (“a voice level”) (column 22, lines 64 to 65: Figure 3); thus, mood/personality classifier generates a mood/personality state signal based on both “the analyzed meaning” and a “detected voice level”.

Regarding claims 4, 11, and 16, *Strubbe et al.* further discloses:

“determining a plurality of groups corresponding to a plurality of voice data” – for immediate mental states, any suitable framework may be used; specifically modeling emotional states and personalities may be according to the big five, an outgrowth of the Myers-Briggs typology, consisting of emotionality, extraversion, openness, agreeableness, and conscientiousness (column 23, line 18 to column 24, line 52); thus, “a plurality of groups” of personality and mental states are disclosed;

“classifying detected voice tone into at least one of the plurality of groups” – mood/personality classifier 290 outputs a state vector, with a number of degrees of

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freedom, that corresponds to the models of personality and mental state chosen by the designer (column 24, lines 53 to 56: Figure 3);

“wherein the step of outputting voice data outputs voice data from the at least one of the plurality of groups” – response generator 415 receives the mood/personality state vector and parsed reply data from the mood/personality classifier 290; response generator 415 selects a response from the response data store 440 based on the mood/personality state (column 24, line 60 to column 25, line 4: Figure 4); response generator 415 may output text data and transmit this to a text to speech converter 275 to generate speech output (column 26, lines 5 to 7: Figure 5); response generator 415 is responsive not only to the utterance of the user in terms of the data contained in the text, but also the classified emotional state and personality of the user may result in shifts in the style (mood) of the conversation simulator’s response (column 26, lines 35 to 42: Figure 5); thus, response generator 415 produces a response reflecting one of the groups of classified emotional state and personality.

Regarding claim 10, *Strubbe et al.* further discloses mood/personality classifier 290 outputs a state vector, with a number of degrees of freedom, that corresponds to the models of personality and mental state chosen by the designer (column 24, lines 53 to 56: Figure 3); for immediate mental states, any suitable framework may be used; specifically modeling emotional states and personalities may be according to the big five, an outgrowth of the Myers-Briggs typology, consisting of emotionality, extraversion, openness, agreeableness, and conscientiousness (column 23, line 18 to column 24, line 52); a personality type reflects “a tendency” of a voice tone.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Strubbe et al.* in view of *Kibre et al.*

Strubbe et al. discloses a big five Myers-Briggs typology, where groups of emotional states and personalities arguably include agreeableness ("polite"), tender-mindedness ("gentle") and lack of conscientiousness ("negligent"), but does not specifically provide a plurality of groups are polite, gentle, general, and negligent. However, *Kibre et al.* teaches a message assembler for a text-to-speech engine, where text string tags provide a personality to voice messages by degree of politeness: super-polite ("polite"), polite ("gentle"), normal ("general"), casual ("gentle" or "general"), and rude ("negligent"). (Column 8, Lines 18 to 19) The objective is to enhance the simulation of a human attendant by selecting different types of expressions or grammatical constructions under certain circumstances. It would have been obvious to one having ordinary skill in the art to provide groups of responses characterized as polite, gentle, general, and negligent as suggested by *Kibre et al.* in the user interface for responding to a user's mental state and/or personality of *Strubbe et al.* for the purpose of enhancing the simulation of a human attendant under certain circumstances.

6. Claims 6, 12, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Strubbe et al.* in view of *Slaney*.

Strubbe et al. discloses a user interface/entertainment device, and notes an application to downloading a Pokeman game. (Column 32, Lines 40 to 48) Although *Strubbe et al.* discloses interaction between a user and a conversation simulator, where an entertainment device may be a game, inputted voice information from a game player and voice data from a game object are not expressly disclosed. However, *Slaney* teaches a system and method for automatic classification of speech based upon affective content, where interactive feedback during play of a video game is provided. (Column 1, Lines 31 to 41) The objective is to automatically classify prosodic information in speech signals to detect the emotional state of the speaker. (Column 1, Lines 51 to 60) It would have been obvious to one having ordinary skill in the art apply a user interface/entertainment device responding to a user's mental state and/or personality of *Strubbe et al.* to a video game interaction between a game player and a game object as suggested by *Slaney* for the purpose of providing interactive feedback based on a detected emotional state of the speaker.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to Applicants' disclosure.

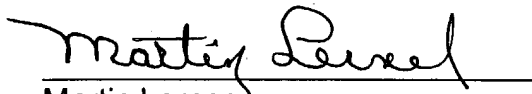
Mizuno et al. discloses related art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Lerner whose telephone number is (703) 308-9064. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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11/3/04


Martin Lerner
Examiner
Group Art Unit 2654